

**SITE DESCRIPTION:** The most spectacular feature of the Whitewater River are the high falls immediately below NC 281. The falls are comprised of two drops separated by a high, bedrock bench. Numerous grottoes and wet cliffs covered with bryophytes line the edges and areas behind the base of the falls. These wet, rocky areas are considered to be among some of the best examples of Spray Cliff communities in the state due to their extent and presence of rare non-vascular plants and ferns. Some of the more uncommon species include the single-sorus spleenwort (*Asplenium monanthes*), gorge filmy-fern (*Hymenophyllum tayloriae*), rock-fir clubmoss (*Huperzia porophila*), orange peat-moss (*Sphagnum subsecundum*), as well as a number of rare liverworts (*Plagiochila* spp., *Radula sullivantii*, *Cheilolejeunea evansii*, *Chiloscyphus muricatus*, and *Lejeunea blomquistii*). Many other rare species of non-vascular plants were historically reported from these communities along the Whitewater River.

In addition to the many bryophytes, these communities typically support species of plants well-adapted to extremely wet or seepage conditions. Uncommon, gametophytic ferns Appalachian shoestring fern (*Vittaria appalachiana*) and grotto felt (*Trichomanes intricatum*) are often present in the recesses of grottoes. Shrubs such as silver-leaf hydrangea (*Hydrangea radiata*), rhododendrons (*Rhododendron maximum* and *R. minus*), wild-raisin (*Viburnum cassinoides*), and yellow-root (*Xanthorhiza simplicissima*) typically hang from cliffs on the edges of Spray Cliffs or are found scattered at their base. Common herbs in these spray zones include seepage-rue (*Thalictrum clavatum*), mountain cynthia (*Krigia montana*), lady fern (*Athyrium asplenoides*), maidenhair spleenwort (*Asplenium trichomanes*), white wood-aster (*Eurybia divaricata*), downy alumroot (*Heuchera villosa*), brook saxifrage (*Saxifraga micranthidifolia*), and creeping bluet (*Houstonia serpyllifolia*). Several smaller Spray Cliff communities occur in waterfalls on Corbin Creek and on the mainstem and tributaries to the Whitewater upstream of NC 281 where cliffs border the river channel. Several rare liverworts and gorge filmy-fern are known to occur in these areas as well.

The river channel above and below the falls as well as the tributaries to the Whitewater River contain a variety of rocky cliffs and bars that support several unique species of plants and lichens in addition to the ones described above. Wet, rocky spray zones occur within the river and its tributary streams where large boulders protrude above the water surface. Rocky bars occur along the length of the upper river north of NC 281, formed by trapped alluvial deposits or in bedded, rock sills that extend perpendicular to the channel into the water. These islands and bars are often devoid of woody vegetation and are dominated by mesic herbs such as tassel-rue (*Trautvetteria carolinensis*), white wood-aster, dwarf St. John's-wort (*Hypericum mutilum*), white turtlehead (*Chelone glabra*), twisted sedge (*Carex torta*), and goldenrods (*Solidago* spp.). Rare species of plants like ephemeral bog chickweed (*Stellaria alsine*) and a population of Bailey's sedge (*Carex baileyi*) grows in the cracks of some of these rock islands. Bars and intermittently wet boulders in the river also harbor populations of three rare lichens: rock gnome lichen (*Gymnoderma lineare*), water-fan lichen (*Hydrothyria venosa*), and rock-shag lichen (*Ephebe solida*).

Montane Acidic Cliffs are present on forested slopes in various locations throughout the site, though most notably along the east side of the river from NC 281 to Corbin Creek. These cliffs tend to be dry and fairly shaded by surrounding forest. Mature Carolina hemlocks (*Tsuga*